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ADVENTURES IN MOSSLAND

POLYTRICHADELPHUS LYALLH MITT.

JOHN W. BAILEY

It was mid-September. My son and I had driven from Seattle to Mount Rainier in the afternoon of a perfect day. The early fall rains had washed from the atmosphere the smoke and dust of a long, dry summer, leaving the air clear as crystal.

Camping for the night just below the Nisqually Glacier, we ate our supper and made our plans to spend the following day on the snowfields above Paradise Valley. The high-bush huckleberries were plentiful and while my son filled a pail with them I investigated the numerous boulders for *Rhacomitrium sudeticum* which grows everywhere on the rocks and produces numerous capsules. I gathered also *Andreaea petrophila*. On the alders beside the river there was an abundance of the ubiquitous *Pseudoleskea* that seems to defy any fixed identification, varying as it does with the place of growth and with the altitude.

Early next morning we continued our journey to the Valley. We saw the pikas busy with their haymaking and occasionally heard the shrill whistle of a marmot. The mosquitoes had gone with the disappearing snow.

Leaving our car at the ranger's cottage, we followed the trail up the Valley to the foot of the great barrier, beyond which lie the snowfields and Paradise Glacier. The path up the barrier zigzags back and forth over bare rocks and gravel. It is easy walking. However, one who is not used to climbing must go slowly. Just below the top the path runs through grass. Scattered about are a few alpine firs and hemlocks, the last outpost of the trees on this part of the mountain. Here we threw ourselves upon the grass, taking advantage of what shade we could find under the diminutive trees. A few late asters were still in bloom, but what caught my bryological eye was the splendid growth of moss—I thought it was *Polytrichum commune*—flourishing here, high up on the mountain side. You may imagine my delight when on investigation I found it not *commune*, but *Polytrichadelphus Lyallii*, a moss I had long hoped to gather. Prof. Frye had given me specimens which he had collected upon the slopes of Mount Hood, but I was not aware of the fact that it grew upon Mount Rainier. *Polytrichadelphus Lyallii* is the only representative of this genus that occurs in Western North America. It is easily recognized by its clustered and curiously irregular-angled, truncated capsules. Its stems are robust and its growth luxur-

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iant, much like *Polytrichum commune*. It does not, however, make very good museum specimens as the pedicels curl and tangle. It grows at high altitudes and, for this reason, during the winter is covered by a deep blanket of snow.

Having rested, we made a final push for the top. Just below the summer snow line, under the shelter of the rocks, I collected a *Grimmia*, belonging near *ovata*. It was fruiting nicely. Having gained the top, we turned and looked back at the wonderful view which spread out like a panorama before us. Mount Hood in Oregon, a hundred miles to the south, on whose slopes Prof. Frye had collected my specimens of *Polytrichadelphus Lyallii*, was plainly visible. The cone of Mount St. Helens was to the right, and a little to the left the snowy dome of Mount Adams appeared like a small replica of Mount Rainier. It was a memorable day, not only from a bryological, but also from the scenic standpoint.

Evening found us where we had camped the night before. Weary from our long day on the mountain, we began our preparations for the night, when suddenly the fog banks began to roll in over the Tatoosh Range and we hastily sought shelter. The next morning, leaving the mountain wrapped in heavy fog, we started for home. As we neared Tacoma the clouds broke away and, turning, we had a most gorgeous view of Rainier,—a fitting close to our happy trip.

SEATTLE, WASHINGTON.

APLOZIA PENDLETONII PEARSON, N. SP.

WM. HY. PEARSON

Growing in lax tufts; no flagella; medium size; dark reddish brown colour, upper branches almost black. Stem flexuose, simple or dichotomously branched; branches 2 to 5 arising from apex of stem; rootlets few, short, discoloured. Leaves imbricate, below somewhat distant, subsecund, amplexicaul, erecto-patent to erect, orbicular, some slightly retuse; texture flaccid; cells medium size, quadrate, walls thin, trigones absent or minute. Bracts similar to the leaves.

Only one immature perianth seen, free from bracts, very small, obovate, upper portion with 5 obtuse angles. No ♂ plants seen.

Dimensions: Stems 1 to $1\frac{1}{3}$ inches long. Leaves 1.6 mm. x 1.7 mm—1.1 mm. x 1.3 mm.—1.2 mm. x 1.3 mm.; base of leaf 0.1 mm. thick; cells 0.04—0.03 mm. in diameter.

Habitat: In slow running water, 4,000 ft., Sissons, California. Collector, George M. Pendleton, 4th August, 1917.

Observations: This plant was sent to me under the name of *Jungermannia cordifolia* Hook., from which it differs in its orbicular leaves, broader than long, and larger cells with thin walls. The most remarkable character of the species is the thickened base of the leaves, the leaves being two cells thick up to four cells from the base. The two layers are not regularly arranged cell on cell, but cross each other.